AUTHOR INDEX, VOLUME XLIX

(Page numbers in *italics* refer to discussion participation.)

Anfinsen, C. B.: The influences of three-dimensional configuration on the chemical reactivity and stability of proteins, 31

——: *44, 45, 47*

Atchison, G. J.: Color and radical formation in irradiated polyvinyl chloride, 385

Bailey, F. E., Jr., and France, H. G.: Molecular association complexes of polymers. Urea and thiourea complexes of high molecular weight poly(ethylene oxide), 397

Barrie, J. A., and Platt, B.: Sorption and diffusion in crystalline elastomers. Part I. Solubility of isomeric hydrocarbons in stretched rubber, 479

Bear, R. S.: *169*

Bender, M. L., Schonbaum, G. R., and Hamilton, G. A.: The function of neighboring groups and side chains in the enzyme chymotrypsin, 75

——: *102*

Bernhard, S. A.: *102*

Bevilacqua, E. M., and English, E. S.: The scission step in Hevea oxidation, 495

Blout, E. R.: *148, 150*

Boyd, R.: The effect of changing volume in the kinetics of bulk polymer degradation, S1

Boyer, P. D.: *39*

Bruice, T. C.: *74, 98*

Cahill, J. W.: See Loconti, J. D.

Cerny, L. C.: The apparent second virial coefficient and Maron's theory of nonelectrolytes, S3

Chambers, R. W.: *74*

Cohen, C.: *144*

Cohen, L., and Rodon, G. W.: Rheological and spray properties of dilute polymer solutions, 377

Cohen, L. A.: *42*

Colvin, J. R.: Twisting of bundles of bacterial cellulose microfibrils, 473

Clowie, J. M. G.: Studies on amylose and its derivatives. Part II. Light-scattering and viscosity studies on amylose acetate in dilute solution, 455

Craig, L. C.: *71, 74*

Davis, B.: see Wiley R. H. (*erratum*)

Doty, P.: *127, 148*

Eaker, D.: *46*

English, E. S.: see Bevilacqua, E. M.

Errede, L. A.: The chemistry of xylylenes. X. Some polymers and telomers of *spiro*-di-*o*-xylylene, 253

Eyring, H.: *145*

Feit, B.-A.: see Zilkha, A.

Flory, P. J.: Phase changes in proteins and polypeptides, 105

——: *128*

Fraenkel-Conrat, H.: *24*

France, H. G.: see Bailey, F. E., Jr.

Frankel, M.: see Zilkha, A.

Fruton, J. S.: *45, 69*

Fukui, K., Yonazawa, T., and Morokuma, K.: On cross termination in radical polymerization, S11

Gibbs, J. H.: *123*

Giuffria, R.: Microscopic studies of Mylar film and its low molecular weight extracts, 427

Glusker, D. L., Lysloff, I., and Stiles, E.: The mechanism of the anionic polymerization of methyl methacrylate. II. The use of molecular weight distributions to establish a mechanism, 315

——, Stiles, E., and Yoncoskie, B.: The mechanism of the anionic polymerization of methyl methacrylate. I. Quantitative determination of active chains using radioactive terminators, 297

Goodman, M.: *150*

Hamilton, G. A.: see Bender, M. L.

Harrap, B. S., and Woods, E. F.: Light scattering and viscosity of proteins in anhydrous formic acid, 353

Haurowitz, F.: *42*

Heller, W.: *128*

Ingram, V. M.: *19, 48*

Jungnickel, J. L., and Weiss, F. T.: Polymer fractionation by precipitation chromatography, 437

Kahn, A.: Critical conditions for the formation of infinite networks, 283

Kalpagam, V.: see Rao, M. R.

Katsoyannis, P. G.: Peptide synthesis and protein structure, 51

Kennedy, J. P., and Thomas, R. M.: The influence of monomer concentration and diluents on the polymerization of isobutene, 189

King, M.: *174*

Koshland, D. E.: *27*

Kraut, J.: *173*

Kurian, C. J., and Price, C. C.: Polyethers. XII. Poly(2,6-disubstituted-1,4-phenylene oxides)

Levine, M., and Temin, S. C.: Isomorphous replacement in a copolyamide system, 241

Lewin, M.: see Schmorak, J.

Loconti, J. D., and Cahill, J. W.: A simple polymer fractionation method, S2

Low, B. W.: The use of x-ray diffraction in the determination of protein structure, 153

——: *168*
Lysloff, I.: see Glusker, D. L.
Mackie, J. S., and Rudin, A.: Electron microscopy of solvent-etched polyethylene surfaces, 407
Mandelkern, L.: *125*
Margoliash, E.: *20, 49*
Markus, G.: *45*
Marvel, C. S., and Rogers, J. R.: The preparation and polymerization of some long-chain mono-, di-, and triolefins with metal coordination catalysts, 335
Matlack, J. D., Chinai, S. N., Guzzi, R. A., and Levi, D. W.: Graft copolymers of *p*-isopropylstyrene and methyl methacrylate, 533
Meister, A.: *73*
Mejzler, D.: see Schmorak, J.
Menčík, Z.: Nomenclature of high polymers, S8
Mighton, H. R.: see Wolinski, L. E.
Moore, S.: *41*
Morokuma, K.: see Fukui, K.
Morrison, M.: *48*
Neurath, H.: *17, 101*
Ovenall, D. W.: A study by E.P.R. of the reaction between polymer radicals and α,α'-diphenyl-β-picryl hydrazine, 225
Overberger, C. G.: Preface to the Symposium on Microstructure of Proteins, 1
Pennings, A. J., and Prins, W.: A versatile osmometer for polymer gels and solutions with applications to cellulosic gels, 507
Platt, B.: see Barrie, J. A.
Price, C. C.: see Kurian, C. J.
Prins, W.: see Pennings, A. J.
Rao, M. R., and Kalpagam, V.: Molecular weight of polyvinyl acetate in benzene, S14
Reiche, W. T.: Polydialkyl- and polydiphenyltin oxides: Physical properties and chemical reactions, 521
Rich, A.: *171*
Rodon, G. W.: see Cohen, L.
Rogers, J. R.: see Marvel, C. S.
Rosen, B.: Time-dependent tensile properties. Part III. Microfracture and non-Fickian vapor diffusion in organic glasses, 177
Rudin, A.: see Mackie, J. S.
Sanger, F.: The sequence of amino acid residues in proteins, 3
Schellman, C. G.: see Schellman, J. A.
Schellman, J. A., and Schellman, C. G.: use of rotatory dispersion in the determination of protein structure, 129
Scheraga, H. A.: *125*
Schmitt, G. J., and Schuerch, C.: The ionic polymerization of cyclic olefins using optically active Gegen ions, 287
Schmorak, J., Mejzler, D., and Lewin, M.: A kinetic study of the mild oxidation of wheat starch by sodium hypochlorite in the alkaline pH range, 203
Schoenberg, E.: Lithium-terminated polydienes and their derivatives, S9
Schonbaum, G. R.: see Bender, M. L.
Schonfeld, E.: An organo-sulfur urethane elastomer system, 277
Schultz, J.: *27*
Schuerch, C.: see Schmitt, G. J.
Stein, W. H.: *48*
Stiles, E.: see Glusker, D. L.
Stille, J. K., and Vessel, E. D.: Polymerization of phenyl-substituted butadienes by metal alkyl catalysts, 419
Sturtevant, J. M.: *97, 127*
Tanford, C.: *44, 150*
Temin, S. C.: see Levine, M.
Thomas, R. M.: see Kennedy, J. P.
Tsuda, Y.: Solid state polymerization of formaldehyde induced by ionizing radiation, 369
Vessel, E. D.: see Stille, J. K.
Weiss, F. T.: Polymer fractionation by precipitation chromatography, 437
Westheimer, F. H.: *98*
Wetlaufer, D. B.: *47, 173*
Wiley, R. H., and Davis, B.: Tracer techniques for the determination of monomer reactivity ratios. III. Ionization chamber assay and the reactivity ratios for the styrene/*p*-methylstyrene copolymerization (*erratum*): S24
Wolinski, L. E., and Mighton, H. R.: The effect of C-substitution of caprolactam on the ring-opening polymerization reaction, 217
Woods, E. F.: see Harrap, B. S.
Worrall, R.: A comparison of Pinner-Stabin and Stabin-Immergut osmometers, S6
Yonazawa, T.: see Fukui, K.
Yoncoskie, B.: see Glusker, D. L.
Zilkha, A., Feit, B.-A., and Frankel, M.: Anionic homogeneous polymerization of acrylonitrile and methacrylonitrile by quaternary ammonium hydroxides, 231
Zimmerman, J.: Radiation grafting of allylic monomers to solid polymeric substrates, 247

SUBJECT INDEX, VOLUME XLIX

Acrylonitrile, and methacrylonitrile, polymerization, 231
Amino acid, sequence of residues, 3
Amylose, and derivatives, light scattering and viscosity studies, 455
Anionic polymerization, acrylonitrile and methacrylonitrile, 231
  methyl methacrylate, 297, 315
Benzene, polyvinyl acetate in, S14
Bulk polymer, kinetics of degradation, S1
Butadienes, polymerization by metal alkyl catalysts, 419
Caprolactam, C-substitution and ring-opening polymerization reaction, 217
Catalyst, metal alkyl, polymerization of butadienes, 419
  metal coordination, olefin polymerization, 335
Cellulose, bacterial, microfibrils, 473
Chromatography, precipitation, polymer fractionation, 437
Chymotrypsin, function of neighboring groups and side chains, 75
Color, irradiated polyvinyl chloride, 385
Complexes, molecular association, urea and thiourea, 397
Configuration, influence of three-dimensional, in proteins, 31
Copolyamide system, isomorphous replacement, 241
Copolymers, *p*-isopropylstyrene and methyl methacrylate, 533
Cross termination, in radical polymerization, S11
Chains, active, methyl methacrylate, 297
Crystallinity, solubility of isomeric hydrocarbons in stretched rubber, 479
Degradation, kinetics, bulk polymer degradation, S1
Diluents, in isobutene polymerization, 189
α,α'-Diphenyl-β-picryl hydrazine, and polymer radicals, E.P.R., 225
Elastomers, crystalline, sorption and diffusion, 479
  organo-sulfur urethane system, 277
Electron microscopy, solvent-etched polyethylene surfaces, 407
Enzyme, chymotrypsin, function of neighboring groups and side chains, 75
E.P.R. studies, polymer radicals and α,α'-diphenyl-β-picryl hydrazine, 225
Film, Mylar, microscopy of, 427
Formaldehyde, solid state polymerization by ionizing radiation, 369
Formic acid, proteins in, light scattering and viscosity, 353
Fractionation, method for polymers, S2
  by precipitation chromatography, 437
Gegen ions, cyclic olefin polymerization, 287
Gels, an osmometer for, 507
Glasses, organic, tensile properties, 177
Grafting, allylic monomers to solid polymer, 247
  p-isopropylstyrene and methyl methacrylate, 533
Groups, neighboring, function in chymotrypsin, 75
Hevea, scission step in oxidation, 495
Ionic polymerization, cyclic olefins, 287
Ionizing radiation, solid state polymerization of formaldehyde, 369
Irradiation, polyvinyl chloride, color and radical formation, 385
Isobutene, monomer and diluents in polymerization, 189
p-Isopropylstyrene, and methyl methacrylate, copolymers, 533
Kinetics, bulk polymer degradation, S1
  mild oxidation of wheat starch, 203
Lithium, terminating, in polydienes, S9
Light scattering, amylose and derivatives, 455
  proteins in anhydrous formic acid, 353
Maron's theory, nonelectrolytes, and second virial coefficient, S3
Methacrylonitrile, and acrylonitrile, polymerization, 231
Methyl methacrylate, anionic polymerization, 297, 315
  p-isopropylstyrene copolymer, 533
p-Methylstyrene, reactivity ratios, copolymerization with styrene (*erratum*), S24
Microfibrils, bacterial cellulose, twisting of bundles, 473
Microscopy, Mylar film and extracts, 427
Molecular weight, distribution, methyl methacrylate, 315
  polyvinyl acetate in benzene, S14
Monomer, concentration, isobutene polymerization, 189
Mylar, microscopy of film and extracts, 427
Networks, infinite, critical conditions for formation, 283
Nomenclature, high polymers, S8
Nonelectrolytes, Maron's theory, and virial coefficient, S3
Olefins, long-chain mono-, di-, and tri-, preparation, 335
Osmometer, Pinner-Stabin and Stabin-Immergut, S6
  for polymer gels and solutions, 507
Oxidation, Hevea, scission step in, 495
Oxidation, wheat starch, kinetics, 203
Peptide, synthesis and protein structure, 51
Phase changes, in proteins and polypeptides, 105
Polydialkyltin oxide, properties and reactions, 521

Polydienes, lithium-terminated, and derivatives, S9
Polydiphenyltin oxide, properties and reactions, 521
Poly(2,6-disubstituted-1,4-phenylene oxides), 267
Polyethers, poly(2,6-disubstituted-1,4-phenylene oxides), 267
Polyethylene oxide, urea and thiourea complexes, 397
  solvent-etched, electron microscopy, 407
Polypeptides, phase changes, 105
Polyvinyl acetate, molecular weight in benzene, S14
Protein, in anhydrous formic acid, 353
  phase changes, 105
  reactivity and stability, 31
  sequence of amino acid residues, 3
  structure: and peptide synthesis, 51; rotatory dispersion, 129; x-ray diffraction, 153
Radiation, ionizing, for solid state polymerization of formaldehyde, 369
  grafting, allylic monomers to solid polymer, 247
Radical, formation, irradiated polyvinyl chloride, 385
  polymer, and α,α'-diphenyl-β-picryl hydrazine, E.P.R., 225
Radical polymerization, cross termination in, S11
Reactivity ratios, styrene/*p*-methylstyrene copolymerization (*errratum*), S24
Replacement, isomorphous, copolyamide system, 241
Residues, amino acid sequence, 3
Rheological properties, dilute polymer solutions, 377
Ring-opening, effect of C-substitution of caprolactam, 217
Rotatory dispersion, protein structure, 129
Rubber, solubility of isomeric hydrocarbons, 479
Scission, in Hevea oxidation, 495
Side chains, function in chymotrypsin, 75
Solid state polymerization, formaldehyde, ionizing radiation, 369
Solutions, dilute polymer, rheological and spray properties, 377
  osmometer for, 507
Spiro-di-*o*-xylylene, polymers and telomers, 253
Spray properties, dilute polymer solutions, 377
Starch, wheat, kinetics of oxidation, 203
Styrene, reactivity ratios, copolymerization with *p*-methylstyrene (*erratum*), S24
Substitution, C, of caprolactam, in ring-opening polymerization, 217
Telomers, of *spiro*-di-*o*-xylylene, 253
Tensile properties, time-dependent, organic glasses, 177
Thiourea, complexes of poly(ethylene oxide), 397
Urea, complexes of poly(ethylene oxide), 397
Urethane, organo-sulfur elastomer system, 277
Virial coefficient, apparent second, S3
Viscosity, amylose and derivatives, 455
  proteins in anhydrous formic acid, 353
X-ray diffraction, protein structure, 153
Xylylenes, polymers and telomers of *spiro*-di-*o*-xylylene, 253